WHAT IS CLAIMED IS:

1. A test module for optically measuring color and intensity of light emitted from light-emitting devices comprising:

at least one sensor having photodetectors to filter color portions of the light from the light-emitting devices, the sensor producing a sensor signal; and

electronics for receiving and conditioning the sensor signal to produce wavelength and intensity output signals.

2. The test module of claim 1 wherein there are a plurality of sensors and each sensor has three photodetectors individually filtered to pass red, green, and blue portions of visible light.

3. The test module of claim 1 wherein the electronics include a microcontroller programmed to use a combination of all color component values to determine intensity and ratios of individual color values to algorithmically match a monochromatic input color to wavelength based on CIE color matching values.

4. The test module of claim 2 further comprising fiber optic cables positioned between the light-emitting devices under test and the sensors.

5. The test module of claim 4 wherein at least a portion of the fiber optic cable is positioned in a tube which is rigidly mounted in the test module adjacent the light-emitting devices under test.

6. The test module of claim 2 wherein the sensors are positioned under a light shield.

7. The test module of claim 1 wherein the electronics further include amplifiers and an analog multiplexer.

8. A color and intensity test module for automated test equipment comprising:

a sensor assembly capable of detecting color content of light emitted from a unit under test;

means for processing the color content to calculate intensity and wavelength data of the light emitted from the unit under test; and

an output interface to present the intensity and wavelength data to the automated test equipment in digital or analog form.

9. The test module of claim 8 wherein the sensor assembly are mounted remotely at the unit under test and electrically connected to the means for processing.

10. The test module of claim 8 wherein the sensor assembly includes fiber optic cables used to collect light signals from the unit under test and transmit the light signals to the sensor assembly.

11. The test module of claim 8 wherein the means for processing uses a predefined set of color ratios based on standard color matching tables to determine wavelength by comparing the color ratios of the light emitted by the unit under test.

12. The test module of claim 8 wherein the means for processing calculates wavelength based on a proportion of the red, green, and blue content of the light detected for a monochromatic emitting device.

13. The test module of claim 8 wherein the means for processing determines a white source from a unit under test when all color sensor levels contribute equally to a total input.

14. The test module of claim 8 wherein the means for processing further converts an input light to an analog signal scaled directly from nanometers to milivolts or a multiple thereof throughout a visible spectrum of 380nm to 700nm.

15. A method to test color and intensity of a light-emitting device comprising the steps of

detecting light from the light-emitting device by a three-color sensor;

filtering the light into levels of red, green, and blue;

conditioning the red, green, and blue levels;

converting the levels into digital values;

generating an analog wavelength value linearly scaled to the visible spectrum;

generating an intensity value linearly representing luminous intensity; and

reading the wavelength value and the intensity value and comparing the values against expected values.

16. The method of claim 15 wherein the step of comparing uses a predefined set of color ratios based on standard color

matching tables to determine wavelength by comparing the color ratios of the detected light irrespective of an absolute value.

17. The method of claim 15 wherein the step of generating a wavelength value provides a calculated wavelength output, based on a proportion of the red, green, and blue colors detected by a monochromatic emitting device.

18. The method of claim 15 wherein the step of converting converts the detected light to an analog signal scaled directly from nanometers to milivolts or a multiple thereof through a visible spectrum of 380nm to 700nm.

19. The method of claim 15 wherein the steps of conditioning and filtering condition and filter the compliment colors of red, green and blue.